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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,727

12/24/2003

Shougo Mikami

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EXAMINER

LU, KUEN S

ART UNIT

PAPER NUMBER

2167

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/743,727	Applicant(s) MIKAMI, SHOUGO	
	Examiner Kuen S. Lu	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/24/03 & 5/16/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Action is responsive to Applicant's Application, filed December 24, 2003.

Priority

2. Applicant's claim of foreign priority on Japan application 2003-343916 filed October 2, 2003, under 35 U.S.C. 119(a)-(d) or (f) is acknowledged.

Information Disclosure Statement

3. The Information Disclosure Statements filed December 24, 2003 and May 16, 2005 have been considered as signed PTO-1449s attached.

Drawings

4. The drawings filed December 24, 2003 have been accepted.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-2 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claims, the element of "said first duplicate-volume storing therein replication data of said first file" in the claims is vague on whether this is a step for copying and storing data operation and whether the first duplicate-volume is a means for storing data, or it is simply a step of copying said first file and storing into said first duplicate-volume. It is also vague on whether the replication data of a file including information of file attributes, such as file name, file size, owner, access settings.

6. Claims 1-2 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. In the claimed subject matter of "executing a backup from each original volume to each duplicate volume", it seems the steps of backing up data, such as copying data and storing data are omitted.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over VERITAS NetBackup™ DataCenter 4.5, System Administrator's Guide for UNIX, hereafter "NetBkp" in view of VERITAS Volume Manager™ 3.2, Administrator's Guide, Solaris, August 2001, hereafter "VM32".

As per claims 1-2 and 8, NetBkp teaches “computer being connected to a storage apparatus for executing a backup” (See Page 1, Overview where NetBkp provides backups and restores fro computers and manage media and storage devices.

NetBkp does not explicitly teach the backup is performed “from each original volume to each duplicate volume” when “having received pair information, said pair information including each original-volume name and each duplicate-volume name”.

However, VM32 teaches the backup is performed “from each original volume to each duplicate volume” (See VM32: Pages 213-214 where a volume is copied to a temporary volume and further backed up to other backup media) when “having received pair information, said pair information including each original-volume name and each duplicate-volume name” (See Pages 213-214 where volume and snapshot volume names are provided in the backup commands).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine VM32's teaching with NetBkp reference by utilizing volume management for computer media backup and restore because both references are directed to computer media management and the combined teaching would have further overcome the physical restrictions imposed by hardware disk devices by providing logical volumes to spam multiple disks to flexibly backup and restore files individually, in group or under a hierarchical structured file system.

NetBkp further teaches “holding a first table that, if files as backup objects are classified into plural groups, stores each group name, file names, and each policy in a manner of being made to correspond to each other, said file names being included in

said each group, said each policy being a method for managing replication data" (See Pages 45-47 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency)

The combined teaching of the NetBkp and VM32 references further teaches "holding a second table for storing said file names, said group names, and flags in a manner of being made to correspond to said duplicate-volume names" (See NetBkp: Pages 174-177 and 189 where catalog reference requirement table shows backup policy and other attributes for catalog requirement, and VM32: Pages 213-214 where volume and snapshot volume names are provided in the backup commands); and "said flags indicating whether or not said duplicate volumes are available" (See NetBkp: Page 189 where backup status in association with policies, storage units, catalog and host properties are available for display and backup status indicates availability of the duplicate volume, and VM32: Pages 213-214 where volume and snapshot volume names are provided in the backup commands).

NetBkp further teaches the following:

"when transmitting said pair information to said storage apparatus in response to a receipt of a specified first group name, said pair information including a first original-volume name and a first duplicate-volume name" (See Pages 213-214 where volume and snapshot volume names are provided in the backup commands),

"said first original-volume storing herein a first file, storing said first file name and

said specified first group name into said second table in a manner of being made to correspond to said first duplicate-volume" (See NetBkp: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement); and

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name" (See NetBkp: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement).

The combined teaching of the NetBkp and VM32 references further teaches "said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name, said first original-volume storing therein the data of said first file, extracting said first duplicate-volume name out of said second table,

said first duplicate-volume storing therein replication data of said first file" (See NetBkp: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement, and VM32: Pages 213-214 where volume and snapshot volume names are provided in the backup commands);

"extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name" (See NetBkp: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement, and VM32: Pages 213-214 where volume and snapshot volume names are provided in the backup commands).

NetBkp further teaches the following:

"judging whether or not said policy has a flag, said policy being stored in said first table in a manner of being made to correspond to said extracted first group name,

said flag indicating that only data in the newest state is necessary for a file backed up in response to a receipt of the specified first group name" (See NetBkp: Pages 123 and

209 where availability of files in the backup for restoration and status of backup is indicated); and

“determining, depending on the judgment result, whether or not said flag should be stored into said second table,

said flag indicating that said first duplicate volume is available” (See NetBkp: Pages 123 and 209 where availability of files in the backup for restoration and status of backup is indicated).

As per claims 3 and 9, the combined teaching of NetBkp and VM32 references further teaches “when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name,

said second group including said first file, said pair information including said first original-volume name and a second duplicate-volume name,

said first original-volume storing therein the data of said first file, extracting said first duplicate-volume name by making reference to said second table,

said first duplicate-volume storing therein said replication data of said first file; and, extracting said first group name stored in said second table in a manner of being made to correspond to said extracted first duplicate-volume name” (See NetBkp: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup

frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement and table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement, and VM32: Pages 213-214 where volume and snapshot volume names are provided in the backup commands).

As per claims 4 and 10, the combined teaching of VM32 and NetBkp references further teaches "said first table stores therein each policy,

said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said computer holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data,

said flags indicating whether or not said duplicate volumes are available" (See BetBkp: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement and table for backup policies includes

policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement, at NetBkp: Pages 123 and 209 where availability of files in the backup for restoration and status of backup is indicated and VM32: Pages 213-214 where volume and snapshot volume names are provided in the backup commands).

NetBkp further teaches the following:

“said replication-data management method further comprising the steps of:
judging whether or not said policy satisfies a predetermined condition,
said policy being stored in said first table in a manner of being made to correspond to said extracted first group name” (See Pages 123 and 209 where availability of files in the backup for restoration and status of backup is indicated); and,
“determining, depending on the judgment result, whether or not said flag should be stored into said third table,
said flag indicating that said first duplicate volume is available” (See Pages 123 and 209 where availability of files in the backup for restoration and status of backup is indicated).

As per claims 5 and 11, NetBkp further teaches “judging whether or not said policy satisfies said predetermined condition is a step of judging whether or not said policy has

a flag, said flag indicating that only data in the newest state is necessary for a file backed up with said group specified, said group being made to correspond to said policy” (See Pages 46, 123-127 where policies indicate files to be backed up and when will be performed).

As per claims 6 and 12, NetBkp further teaches “said each group includes files which are updated as a result of executing each business-operation, said each business-operation being one collection of a series of processings” (See Page 291 where files have been changed since last backup is checked for verifying and backing up).

As per claims 7 and 13, the combined teaching of VM32 and NetBkp references further teaches the following:

“wherein said first table stores therein each policy,

said each policy being a method for managing said replication data in a manner of being made to correspond to said each group name,

said computer holding a third table for storing flags in a manner of being made to correspond to said duplicate-volume names for storing said replication data,

said flags indicating whether or not said duplicate volumes are available” (See NetBkp: Pages 45-47 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup

frequency, VM32: Pages 213-214 where a volume is copied to a temporary volume and further backed up to other backup media).

NetBkp further teaches the following:

“said replication-data management method further comprising the steps of:

when transmitting said pair information to said storage apparatus in response to a receipt of a specified second group name,

said second group including files which are updated as a result of executing a second business-operation,

said pair information including said first original-volume name and a second duplicate-volume name,

said first original-volume storing therein said first file which belongs to said second group, extracting said first duplicate-volume and said first group name,

said first duplicate-volume storing therein said replication data of said first file,

said first group name being stored in said second table in a manner of being made to correspond to said first duplicate-volume name” (See Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement);

judging whether or not a file name is only said first file name,

said file name being stored in said first table in a manner of being made to correspond to said extracted first group name" (See: Pages 45-47, 118, 174-177 and 189 where table for backup policies includes policy name for the backup group, files in each backup group and backup policies are set in according to different attributes and each policy manages a specific group of replication data for specific client, group of files, data change frequency, storage media and backup frequency and where catalog reference requirement table shows backup policy and other attributes for catalog requirement);

"judging whether or not said policy satisfies a predetermined condition,

said policy being stored in said first table in a manner of being made to correspond to said extracted first group name" (See Pages 123 and 209 where availability of files in the backup for restoration and status of backup is indicated); and,

"determining, depending on the judgment result, whether or not a flag should be stored into said third table,

said flag indicating that said second duplicate volume is available" (See NetBkp: Pages 123 and 209 where availability of files in the backup for restoration and status of backup is indicated).

Conclusions

9. The prior art made of record

U. VERITAS Volume Manager™ 3.2, Administrator's Guide, Solaris, August 2001

V. VERITAS NetBackup™ DataCenter 4.5, System Administrator's Guide for UNIX, March 2002

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A. U.S. Patent 6,260,120

B. U.S. Patent Application 2003/0217119


Contact information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Application/Control Number: 10/743,727
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Kuen S. Lu 
Patent Examiner

April 25, 2006


STEVEN M. JOHNSON
PRIMARY EXAMINER